



# ***Stormwater Treatment Area 3/4 Report***

***WRAC Lake Okeechobee  
Committee  
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## **Everglades Construction Project**

- All 6 STAs now in flow-through operations
- Over 40,000 acres of constructed wetlands
- Major enhancements underway over past three years in all 6 STAs
- STA expansions will add about 18,000 acres
  - Further assist in maximizing the effectiveness of the existing STAs in improving water quality entering the EPA
  - Initial expansions to be flow-capable by 12/2006
  - Compartment B and C build-outs to follow



- 16,530 acres of effective treatment area
- Long-Term Plan enhancements are underway
- Cell 3 internal levee and structures complete; re-flooding underway for vegetation grow-in
- PSTA demonstration project in Cell 2B complete and operational





## **STA-3/4 Original Design Assumptions**

- **Target STA-3/4 outflow concentration 50 ppb**
- **Based on EAA flows and phosphorus loads for 1979-1988**
  - **Adjusted for reductions due to BMPs and conversion to STAs**
- **Total STA-3/4 average annual inflow volume 600,000 ac-feet**
  - **Average annual 347,000 ac-feet from basin runoff**
    - **EAA (S-7/S-2 and S-8/S-3)**
    - **C-139**
    - **South Florida Conservancy District**
    - **South Shore Drainage District**



## **STA-3/4 Original Design Assumptions**

**Continued:**

- **Average annual 16,000 ac-feet of historic Lake Okeechobee regulatory releases thru S-7, S-8 and S-150**
- **Average annual 236,000 ac-feet “allowance for additional Lake Okeechobee releases as water supply for the Everglades”**
  - **Lake Okeechobee releases assumed phosphorus concentration 70 ppb**





## **STA-3/4 Inflows - Current Assumptions**

### **2003 Amended EFA and the Long-Term Plan**

- Target STA outflow concentration lowered substantially to achieve phosphorus criterion of 10 ppb in the Everglades Protection Area
- Included updated projected STA-3/4 inflow volumes and loads
- Predicated on Adaptive Implementation
  - Recognized need to continually update the STA inflow data sets as new information becomes available



## **STA-3/4 Inflows - Current Assumptions**

**EAA Regional Feasibility Study conducted in 2005 to optimize STAs with 18,000-acre expansion**

- **Included updated STA-3/4 inflow volumes and loads**
- **Used flows from SFWMM simulation (36-yr period 1965-2000)**
  - **No assumed reduction in flows due to BMPs**
- **Water quality data from Water Years 1995-2004**
- **Total average annual inflow volume 600,000 ac-feet**
  - **459,000 ac-feet of basin runoff**
  - **139,000 ac-feet allowance for Lake Okeechobee releases (70 ppb)**





## **STA-3/4 Inflows - Current Assumptions**

**Continued:**

**Lake Okeechobee Regulation Schedule Study underway**

- **Assumes Lake Okeechobee releases phosphorus concentration of 146 ppb**
  - **Based on recent concentration data (WY04, WY05 and partial WY06)**
  - **Assumed representative of concentrations that may exist during implementation time-frame of the new interim regulation schedule (2007-2010)**



## **STA-3/4 Inflows - Current Assumptions**

**Continued:**

- **Corresponding Lake Okeechobee regulatory release volume limited to average annual 63,000 ac-feet**
  - **higher volumes and associated loads would potentially impact STA-3/4 performance and compliance with phosphorus criterion of 10 ppb in the Everglades Protection Area**





**Questions?**